September 1, 2000

Is PROGRESA Working?

Summary of the Results of an Evaluation by IFPRI

Synthesis Evaluation Report: Impact

The International Food Policy Research Institute (IFPRI)

A compilation of research findings by the PROGRESA Evaluation Team under the leadership of Dr. Emmanuel Skoufias, Senior Research Fellow, IFPRI and the participation as external advisors of Dr. Jere Behrman of the University of Pennsylvania, Dr. Paul Gertler of the University of California at Berkeley, and Dr. T. Paul Schultz of Yale University.

Bonnie McClafferty and Susan Parker are gratefully recognized for their help in synthesizing the evaluation studies. Thanks to Lourdes Hinayon for providing excellent administrative support. This report is dedicated to the memory of Dr. José Gómez de León, who firmly believed that PROGRESA had the potential to change the lives of many poor Mexicans.

Foreword

In early 1998, the International Food Policy Research Institute (IFPRI) was asked to assist the PROGRESA administration to "determine if PROGRESA is functioning in practice as it is intended to by design." This document summarizes the findings contained in a series of reports presented by IFPRI to PROGRESA from November 1998 through August 2000. A more detailed description of the research, rationale and methods appears in the list of supporting documents from which this document has been derived.

In brief, the findings of IFPRI's evaluation are that after just three years, the poor children of Mexico in the rural areas where PROGRESA is currently operating are more likely to enroll in school, are eating more diversified diets, getting more frequent health care and learning that the future may look quite different from the past.

The majority of the evaluation findings suggest that PROGRESA's combination of education, health, and nutrition interventions into one integrated package can be an effective means of breaking the intergenerational transmission of poverty. However, PROGRESA is still in its beginning stages. Many of the impacts of the program are likely to manifest themselves in the future. Clearly, the simultaneous intervention in the health and nutrition of 0 to 5 year old children of poor households today will positively reinforce school attendance, performance and attainment of children tomorrow. Thus, in addition to the benefits measured after three years of operation, it is likely that PROGRESA will have additional benefits in future years. Whether the vicious cycle of poverty and its intergenerational transmission are indeed broken can only be determined by continuing with PROGRESA and continuing to evaluate in the medium and long run its impact on the livelihood of Mexico's poor.

The possibility of expanding the coverage of PROGRESA to poor households in urban areas implies that there is opportunity to use program evaluation, such as that presented herein, as a means to adapt some of the components of the program to suit the needs of households in different environments. The IFPRI research team would encourage Mexico's policy leaders to capitalize on the innovative precedent established by PROGRESA and to consider program evaluation as an indispensable component of all social policies.

Dr. Emmanuel Skoufias
Project Leader and
IFPRI Senior Research Fellow

On behalf of the IFPRI Research team

Executive Summary

PROGRESA is one of the major programs of the Mexican government aimed at developing the human capital of poor households. Targeting its benefits directly to the population in extreme poverty in rural areas, it aims to alleviate current poverty through monetary and in-kind benefits, as well as reduce future levels of poverty by encouraging investments in education, health and nutrition. This document summarizes 18 months of extensive research by the International Food Policy Research Institute designed to evaluate whether PROGRESA has been successful at achieving its goals. The evaluation analyzes what has been the impact of PROGRESA on education, health, and nutrition as well as in other areas, such as women's status and work incentives.

The evaluation is based on data collected from seven states that were among the first states to receive PROGRESA, including Guerrero, Hidalgo, Michoacán, Puebla, Querétero, San Luis Potosi, and Veracruz. A total of 24,000 households from 506 localities in these states were interviewed periodically between October 1997 and November 1999. Focus groups and workshops with beneficiaries, local leaders, PROGRESA officials, health clinic workers, and school-teachers were also carried out.

In the central impact areas of education, health, and nutrition, the results are encouraging. The initial analysis of PROGRESA's impact on education shows that the program has significantly increased the enrollment of boys and girls, particularly of girls and above all, at the secondary school level (Schultz, 2000). The results imply that children will have on average, about 0.7 years of extra schooling because of PROGRESA, although this effect may increase if children are more likely to go on to senior high school as a result of PROGRESA. Taking into account that higher schooling is associated with higher levels of income, the estimations imply that children have lifetime earnings which are 8% higher due to the education benefits they have received through PROGRESA. As a result of PROGRESA, both children and adults are experiencing improvements in health. Specifically, children receiving PROGRESA's benefits have a 12% lower incidence of illness as a result of the program's benefits and adults report a decrease in 19% of sick or disability days (Gertler, 2000). In the area of nutrition, PROGRESA has had a significant effect on reducing the probability of stunting for children aged 12 to 36 months (Behrman and Hoddinott, 2000). Finally, PROGRESA has also had important impacts on food consumption. PROGRESA beneficiaries report higher calorie consumption and are eating a more diverse diet, including more fruits, vegetables, and meat.

In other areas of the evaluation, the design feature of PROGRESA which gives control of the monetary benefits to women, has led to women having more say in decision making within the household. Women report a greater level of empowerment, defined as increased self confidence and control over their movements and household resources. Additionally, there is no evidence that adults are working less in response to the monetary benefits. This implies that PROGRESA does not create "dependence" on its benefits through reducing individual's self-sufficiency efforts.

Introduction

Because of Mexico's new and innovative Education, Health and Nutrition Program (PROGRESA), poor Mexicans are beginning to see improvements in the health, education and nutrition of their children. The International Food Policy Research Institute (IFPRI) of Washington, DC, has assisted PROGRESA in conducting an evaluation indicating that the roots of this anti-poverty program are beginning to take hold. Based on repeated surveys of individuals and households in localities randomly assigned as PROGRESA and non-PROGRESA localities before the start of the program, the research results show that that after just three years, the poor children of the rural communities of Mexico where PROGRESA operates are attending school longer, eating more diversified diets, getting more frequent health care and learning that the future may look quite different from the past.

The Mexican Constitution mandates the well being of the population, yet for the vast majority of society, the population welfare has been marred by generations of unequal accumulation of wealth and opportunity. PROGRESA is providing an opportunity to narrow the divide by focusing on poverty's basic determinants: education, health, and nutrition. Because of PROGRESA's efforts, a fragile transformation has begun, and research findings indicate that PROGRESA is having an impact.

PROGRESA is one of the major programs of the Mexican government aimed at developing the human capital of poor households. PROGRESA began its operations in August of 1997 in an effort to break the entangling web of poverty where malnutrition, morbidity, high infant mortality rates, high fertility, school dropout rates and unhealthy living conditions prevail. As part of an overall strategy for poverty alleviation in Mexico, PROGRESA works in conjunction with other programs that are aimed at developing employment and income opportunities (such as the Temporary Employment Program, PET) and at facilitating the formation of physical capital, such as the State and Municipal Social Infrastructure Fund (FAIS). As of the end of 1999 PROGRESA accounted for slightly less than 20% of the Federal Government budget

allocated to poverty alleviation. Unlike PET and FAIS, PROGRESA's multi-sectoral focus provides an integrated package of education, and nutrition and health services to poor families. Moreover, rather than being simply a cash transfer program, PROGRESA requires active participation by the recipient households in exchange for the benefits received.

At the end of 1999, PROGRESA covered approximately 2.6 million families or about 40% of all rural families and one-ninth of all families in Mexico. At that time, the program operated in almost 50,000 localities, in more than 2,000 municipalities and 31 states. PROGRESA's budget of approximately $777 million in 1999 was equivalent to 0.2% of Mexico's GDP. In all of Latin America, Mexico is implementing an effective program that is serving as a model and beginning to take hold across Latin America (e.g., Honduras, Nicaragua, and Argentina).

The education component of PROGRESA is designed to increase school enrollment among youth in Mexico's poor rural communities by making education grants available to pupils' mothers, who then are required to have their children attend school regularly. In localities where PROGRESA currently operates (henceforth, PROGRESA localities), households that have been characterized as poor, and have children enrolled in grades 3-9, are eligible to receive these educational grants every two months. The levels of these grants were determined taking into account, among other factors, what a child would earn in the labor force or contribute to family production. The educational grants are slightly higher at the secondary level for girls, given their propensity to drop out at earlier ages.

In the area of health and nutrition, PROGRESA brings basic attention to health issues and promotes health care through free preventative interventions, such as nutritional supplements, and education on hygiene and nutrition as well as monetary transfers for the purchase of food. Receipt of monetary transfers and nutritional supplements are tied to mandatory health care visits to public clinics. This aspect of the program emphasizes targeting its benefits to children under five, and pregnant

and lactating women, and is administered by the Ministry of Health and by IMSS-Solidaridad, a branch of the Mexican Social Security Institute, which provides benefits to uninsured individuals in rural areas.

Nutritional supplements are given to children between the ages of four months and two years, and to pregnant and breast-feeding women. If signs of malnutrition are detected in children between the ages of 2 and 5, nutritional supplements will also be administered. The nutritional status of beneficiaries is monitored by mandatory visits to the clinic and is more frequently monitored for children five years of age and under, pregnant women and lactating women. Upon each visit, young children and lactating women are measured for wasting (weight-for-height), stunting (height-for-age), and weight-for-age. An appointment monitoring system is set up and a nurse or doctor verifies adherence. Every two months, certification of beneficiary visits is submitted to PROGRESA by the health care professionals, which triggers the receipt of bi-monthly food support.

What is perhaps most innovative about PROGRESA — a feature that has captured the attention of development practitioners throughout the world — is the critical mechanism PROGRESA has used to deliver its resources. PROGRESA gives benefits exclusively to mothers. The concentration and value of this transfer in the hands of the mother, and the enormous scale of the program — so far 2.6 million families in extreme poverty, or almost 40 percent of all rural families in Mexico — suggests that the potential impact of the program in altering the balance of power within Mexican families is significant. Mexico has taken the lead in implementing an anti-poverty intervention that recognizes that mothers effectively and efficiently use resources in a manner that reflects the immediate needs of the family.

This document will summarize 18 months of extensive research designed to evaluate the impact of PROGRESA on three poverty reduction focus areas: improving school enrollment, improving health and nutrition outcomes, and increasing household consumption for poor rural

families. Other topics such as the impact of PROGRESA on women's status, intra-household transfers, and work incentives are also examined. PROGRESA and IFPRI brought together an impressive team of eminent research economists, sociologists, nutritionists and health care experts to conduct and analyze survey data to determine PROGRESA's impact. The findings presented here summarize a series of reports presented by IFPRI to PROGRESA from November 1998 through August 2000. It should also be noted that, given the length of this document, not all results could be summarized and furthermore, the evaluation is still in progress, so that this summary of results is based only on what has been completed thus far. A more detailed description of the research, rationale and methods appears in the list of supporting documents from which this report has been derived.

The Evaluation

Why conduct an evaluation?

Evaluations systematically examine programs to see if they are accomplishing their objectives, and if they are worth renewing or extending. Like all research, program evaluation follows a logical order or sequence of investigation. It begins with a problem and theoretical approaches to that problem, and formulates a research design that provides the blueprint for data collection related to the problem. Data are then gathered, analyzed and synthesized. The objective of program evaluation, as a research effort, is to produce generalizable knowledge that may — as in the case of the evaluation of PROGRESA — be applicable to a specific program. For PROGRESA, program evaluation can be used to help establish the best use of government resources as Mexico works to improve the quality of life for its poor population.

Who is IFPRI?

In early 1998, the International Food Policy Research Institute was asked to assist the Government of Mexico to "determine if PROGRESA is functioning in practice as it is intended to by design."

IFPRI, a non-profit policy research institute, is known as a world leader in food policy research. IFPRI is staffed by 120 mostly Ph.D.- level social and biological scientists who conduct policy analysis and research in approximately 30 countries in the developing world. The institute's areas of policy research expertise include macroeconomics and trade, markets, agriculture and natural resources management, poverty, and food consumption and nutrition. For the PROGRESA evaluation IFPRI supplemented its research staff by drawing on the expertise of eminent researchers, including Dr. Jere Behrman of the University of Pennsylvania, Dr. Paul Gertler of the University of California at Berkeley and Dr. Paul Schultz of Yale University.

Why is this evaluation different from others?

The strength of this evaluation exercise lies in its methods. Three key factors contribute to its rigor: (i) the random assignment of localities into treatment and controls; (ii) the collection of repeated observations on

households and their members before and after the program; and (iii) the analytical approaches used in determining whether PROGRESA has an impact.

The fundamental problem in the evaluation of any social program is the fact that households participating in the program cannot be simultaneously observed in the alternative state of no treatment. For a proper evaluation of the impact of a program it is necessary to observe a group of households that are similar to beneficiary households in every respect possible but do not benefit from the program. In the case of PROGRESA, where evaluation was conceived from the beginning as part of the design of the program, the solution to this evaluation problem is achieved by random assignment of localities into treatment and control groups. From a set of rural communities in the same geographic region, localities were randomly selected for participation in PROGRESA (treatment localities) while the rest were introduced into the program at later phases (control localities). As the randomization was adequately done (Behrman and Todd 1999a), it ensures that there is only a small known probability that the differences between treatment and control groups are due to unobserved factors. As a consequence researchers can infer whether the changes observed in individual outcomes such as school enrollment, or health and nutritional status are due to the program or other factors. It is important to emphasize that most large-scale social programs in developing and developed countries alike have not been able to take advantage of this preferred method of evaluation analysis. PROGRESA's randomized interventions lend exceptional strength to the evaluation process.

The random assignment of localities into treatment and control groups combined with the availability of repeated observations on households and their members before and after the program can provide the most reliable answer to the question of whether the program has an impact or not. By examining changes over time within treatment and control localities (i.e., comparing difference-in-difference) one is able to control for characteristics that do not change over time within treatment and control localities, as well as for

characteristics that change over time and are common to control and treatment areas.

The majority of the evaluation studies and results summarized herein are different applications of the difference-in-difference estimator that compares the change (before and after PROGRESA) in the outcome of interest with the corresponding change in non-PROGRESA localities after accounting for differences in observable characteristics of individuals, households and localities.

Evaluation Tools

To evaluate impact, researchers conducted formal surveys and structured and semi-structured observations and interviews, focus groups and workshops with a series of stakeholders, including beneficiaries, local leaders, local PROGRESA officials, central PROGRESA officials, health clinic doctors, nurses and assistants, and school teachers.

Specifically the sample used in the evaluation of PROGRESA consists of repeated observations (panel data) collected for 24,000 households from 506 localities. The data used in the evaluation was carried out between October 1997 and November 1999. The communities were located in the seven states that were among the first states to receive PROGRESA, including Guerrero, Hidalgo, Michoacán, Puebla, Querétero, San Luis Potosi, and Veracruz. Of the 506 communities, 320 were designated as treatment and 186 as control communities.

In November 1997 PROGRESA conducted a survey of the socio-economic conditions of rural Mexican households in the evaluation communities to determine which households would be eligible for benefits. Using PROGRESA's beneficiary selection methods, this evaluation investigated households that were classified as eligible and non-eligible for participation in the program in both treatment and control communities. On average in the evaluation sample, 78% of the households were classified as eligible for program benefits. The first

evaluation survey took place in March 1998 before the initiation of benefits in May 1998.

The rest of the evaluation surveys were conducted after beneficiary households started receiving benefits from PROGRESA. One round of surveys took place in October 1998, which was well after most households received some benefits as part of their participation in the program. The next two waves took place in June 1999 and November 1999. A number of core questions about the demographic composition of households and their socio-economic status were applied in each round of the survey. These core questions were accompanied by specific questionnaires, focused on collecting information critical to a thorough evaluation of the impact of the program. The topics of these modules included collecting information about family background, assets brought to marriage, schooling indicators, health status and utilization, parental attitudes and aspirations towards children's schooling, consumption of food and non-food items, the allocation of time of household members in various activities, and self-employment activities.

The preceding surveys were supplemented by school and clinic surveys, community questionnaires, data on student achievement test scores, and other school and clinic administrative data.

Given that impact can be affected by the operational efficiency of the program, an extensive operational evaluation was also conducted. The operational evaluation used both quantitative and qualitative surveys. The quantitative surveys included repeated surveys of beneficiary households, schools and health clinics. The qualitative surveys included semi-structured interviews with stakeholders in PROGRESA including school and health clinic directors, and focus group discussions with PROGRESA liaisons (*promotoras*), beneficiaries and non-beneficiaries. In total, 23 focus groups were held involving 230 participants: 80 beneficiaries from 8 communities, 80 non-beneficiaries from 8 communities, and 70 *promotoras* from 70 communities. Although the information collected as part of the qualitative surveys is not intended to be statistically representative or true for

the majority of the population, the research produces information that broadens the field of inquiry to include questions, issues and factors that may have been previously missed, and additional levels of explanatory and interpretive power.

Is PROGRESA selecting the right households into the program?

PROGRESA's methodology consists of three stages: (1) the selection of localities; (2) the selection of beneficiary households within selected localities; and (3) finalizing the list of beneficiaries after feedback from the community assemblies about families excluded or included incorrectly. The conclusion regarding the accuracy of PROGRESA's targeting is that overall it is an effective method of selecting households into the program. The evaluation analysis shows that the accuracy of PROGRESA's targeting, both in terms of selecting localities where poor households are more likely to be found and in terms of selecting poorest households within these localities, is good (Skoufias, Davis, and Behrman, 1999a). However, this accuracy fades when it comes to distinguishing between localities in the moderate level of marginality. A similar conclusion is derived from our evaluation of the targeting of households within localities. PROGRESA's targeting is not perfect, but relatively more effective at identifying the extremely poor households within localities and less so when it comes to selecting households that are moderately poor.

Is the method used by PROGRESA for selecting beneficiary households the best among other feasible options?

Based on simulations using quantitative data which take into account the costs of targeting, PROGRESA's targeting as practiced during the second phase of the program is the most effective among the set of feasible targeting and transfer schemes in reducing the depth of poverty and the severity of poverty in Mexico (Skoufias, Davis and de la Vega, 1999b). In short, PROGRESA performed closer to the ideal of "perfect" targeting than any of the alternative feasible transfer and targeting schemes examined. The research finds that PROGRESA's method of targeting households outperforms alternative methods in terms of reducing

poverty measures weighting extremely poor households more heavily, although the accomplishments of PROGRESA's targeting method were only 3.05 percentage points higher than the reduction in poverty that could be achieved if all (or 100%) of the households in PROGRESA localities were included into the program instead of the 78% selected by PROGRESA. The evidence also suggests that the gains from targeting are greater in larger rural communities. Given that the selection of beneficiaries by PROGRESA in rural areas establishes the principle of targeting in contrast to indiscriminant or uniform coverage, these results suggest that there are likely to be additional gains from targeting as the program expands to semi-urban and urban areas.

Does PROGRESA reduce current poverty?

Looking first at the headcount ratio, which simply measures the percentage of the population with income levels below the poverty level in a community, the percentage of households in poverty in the rural marginal communities where PROGRESA operates according to the headcount shows a reduction of about 8% through the supports of PROGRESA.

The head count, however, is not necessarily a good indicator of poverty. The greatest deficiency of the headcount ratio is that it considers everyone below the poverty line to be equally poor and does not take into account the fact that even within the poor population some households are poorer than others. The Foster, Greer, and Thorbecke indicators that measure the gap and severity of poverty place greater weight on the poorest households within the population in poverty. Much larger reductions are evident through these poverty measures, which show that the level of poverty according to the poverty gap is reduced by 30% whereas the severity of the poverty index is reduced by 45%. Given that these indicators put greater weight on the poorest of the poor, the simulation results suggest that the largest reductions in poverty of PROGRESA are being achieved in the poorest of the poor population.

What were the perceptions of stakeholders in PROGRESA localities regarding the selection of beneficiaries?

Quantitative and qualitative data indicate that there are perceived problems with the selection process: mainly, that there are poor people who need the benefits and do not receive them and, less frequently mentioned, that there are people receiving benefits who do not need them (Adato, Coady, and Ruel, 2000). Although not statistically representative, the qualitative data collected from focus groups indicate some problems with the original socio-economic survey. For example, in some cases people were not home when the enumerator came to call and the enumerators did not return, or people overstated their resources because they were ashamed to admit their poverty. Most respondents in the qualitative research did not disagree with targeting in the sense that they did not believe that professionals, shop owners or other relatively rich people should receive benefits; rather they believe that the mistakes should be corrected. Also, focus groups indicated that aside from these more obviously richer people, in these rural communities people perceive themselves as 'all poor' and all in need, and thus did not agree with the finer distinctions made in the selection process. However, they did indicate that the selection did not appear to be politically motivated.

At the community level, focus groups and interviews with doctors and school directors indicated that there has not been an opportunity to have an input into the selection process. In addition, these stakeholders indicated that PROGRESA's household targeting strategy has in some communities been associated with social divisions, most often manifested in non-beneficiaries not wanting to participate with beneficiaries in community work (Adato, Coady, and Ruel, 2000; Adato, 2000). Responses from these stakeholders suggest that these problems could be reduced through a more systematic implementation of PROGRESA's policy proposal to provide an opportunity for communities to review and improve the selection so that they are in agreement with its fairness.

Policy Considerations for Selection of Beneficiaries into PROGRESA

- The evaluation of targeting revealed that as PROGRESA expands into less marginal communities targeting inaccuracies are likely to compound at both the locality level and at the household level. Thus if PROGRESA expands into less marginal rural areas and marginal urban areas, there needs to be a modification to the methods used for selecting households if the effectiveness of the program is to continue. The key issues deserving careful consideration include:

  - The current reliance on self-reported household income as a key factor for selection into the program. The incidence of underreporting will increase over time as more surveys are conducted.

  - In the event PROGRESA is expanded to urban areas where alternative insurance and safety net programs are already in place implies the need for coordination and careful planning so that benefits are not duplicated and incentives for households to escape from poverty are not distorted.

Impact of PROGRESA on School Enrollment

Background

Studies have shown that the economic returns to children from continuing to enroll in secondary school are relatively large and provide children with opportunities to escape from poverty. Mexico's children typically maintain a high enrollment rate in primary school of about 93%. For the rural poor, however, education often stops there.

There appear to be two critical dips in enrollment rates among rural children in Mexico. Children generally begin dropping out of school after completing the sixth grade when enrollment rates decline to 55%. But the trend in enrollment once again witnesses a steep decline during the transition to senior secondary school or tenth grade, where enrollment once again falls to 58% for those qualified to enter.

As part of the education component of PROGRESA, benefits are given out in lump sums every two months. The monthly amount of the scholarship varies by age and sex of the child. For example, in the second semester of 2000, the scholarship ranged from the minimum of 90 pesos for a boy attending third grade to a maximum of 335 pesos for a girl attending the third year of secondary school. In poor areas of Mexico, girls tend to drop out of school earlier than boys. In order to reverse this tendency, the grants were structured to be about 15% higher in the secondary school level for girls.

Money for school supplies is given twice a year. The amount given for materials varies by educational level. For primary school beneficiaries, this support amounts to 180 pesos per child per school year while for benefits for school supplies for children in secondary school grades rises to 225 pesos per year.

The most critical objective of PROGRESA's education program is to increase the transition of poor rural youth into junior secondary school (7^{th} to 9^{th} grade). By design, educational grants for enrolling in the first year of junior secondary school increase by half to 275 pesos with a small advantage to girls over boys in the first three years of secondary school.

"PROGRESA has had a positive effect on school enrollment, particularly during the difficult transition to secondary school."

Methodology

PROGRESA's effect on school enrollment is evaluated at two levels: first, by comparing for each grade completed simple differences in average enrollment rates of children in treatment (i.e., PROGRESA) and control localities; and second, by comparing differences in enrollment outcomes at the level of the individual child between those who are program-eligible and those who are not receiving benefits. Family and community factors are controlled for in this later analysis. To ensure confidence in the results, the robustness of the estimated impact of PROGRESA is also examined by comparing the impact of PROGRESA using two different samples of children. One sample consists of the children who are present in all five rounds of the surveys; the other consists of all observations on all children for which data are available.

Are enrollment rates higher in PROGRESA localities than non-PROGRESA localities?

After an exhaustive series of statistical tests, it was concluded that in all cases PROGRESA had a positive enrollment effect for both boys and girls, primary and secondary levels and irrespective of the sample used.

At the primary school level, where enrollment rates before PROGRESA were between 90 and 94 percent, statistical methods that control for the age and family background of children as well as community characteristics revealed that PROGRESA succeeds at increasing the enrollment rate of boys by 0.74 to 1.07 percentage points and of girls by 0.96 to 1.45 percentage points (Schultz, 2000a).

At the secondary school level, where the initial enrollment rates before PROGRESA were 67% for girls and 73% for boys, the increase in enrollment effects for girls ranged from 7.2 to 9.3 percentage points and for boys from 3.5 to 5.8 percentage points. This represents a proportional increase of boys from 5 to 8 percent and for girls 11 to 14 percent (Schultz, 2000a).

How much can schooling be expected to increase as a result of PROGRESA?

If these program effects can be sustained over the period in which a child is of school age, the accumulated effect on educational attainment for the average child from a poor household would be the sum of the estimated change for each grade level. Summing these values for grades 1 to 9 suggests that the program can be expected to increase educational attainment of the poor of both sexes by 0.66 years of additional schooling. Girls in particular are gaining 0.72 years of additional schooling by the ninth grade while boys gain 0.64 years of additional schooling (Schultz, 2000a). Given that the average youth aged 18 achieved about 6.2 years of completed schooling prior to the program, these data are suggestive of an overall increase in educational attainment of about 10%.

Will PROGRESA's schooling benefit children into adulthood?

If current urban wages approximate what PROGRESA's beneficiaries can expect to earn from their schooling in terms of future percentage increases in their wages, the internal rate of return, taking into account the costs of the grants, to PROGRESA's educational benefits is roughly 8% per year (Schultz, 2000a). Children, when they reach adulthood, will have permanently higher earnings of 8% as a result of the increased years of schooling. Thus, in addition to improving beneficiaries current livelihood by reducing current poverty and raising consumption, PROGRESA is having a significant impact on raising overall human capital into the future.

It should be emphasized that PROGRESA might have additional impacts on increasing education beyond the level of secondary school if children are more likely to go on to higher levels of schooling, implying the estimates here are lower bounds of the impacts of PROGRESA on schooling. Note that there are higher returns to education in Mexico for high school education and beyond. These possible impacts would increase the overall impact of PROGRESA on schooling and should be evaluated in the future.

Is increased access to junior secondary schools more or less effective than educational grants at increasing school enrollments of poor families?

Increased access to schooling may be considered as an alternative to providing educational grants to poor families. For example, 12% of the children in the PROGRESA evaluation sample currently have to travel more than 4 kilometers to a junior secondary school. The evaluation research shows that when access to secondary schooling is measured in terms of distance, if additional schools were to be build and staffed so that all children reside only 4 kilometers from their junior secondary school, secondary school enrollments would increase by 0.46 percentage points for girls and by 0.34 for boys, impacts less than one-tenth the size of those from PROGRESA. In comparison to the impact of PROGRESA's targeted educational grants to poor families, the effect of increased access to schooling appears to be a relatively less effective means of increasing school enrollments. However, a more complete answer to this question requires a careful consideration of the costs associated with each option (Schultz, 2000a).

Are PROGRESA's educational grants having an impact on the critical educational transition from sixth to seventh grade?

The impact of PROGRESA on enrollment rates is largest for children who have completed the sixth grade and are thus qualified to enroll in junior secondary school, increasing 11.1 percentage points for both sexes combined or 14.8 percentage points for girls and 6.5 percentage points for boys, representing percentage increases of over 20% for girls and about 10% for boys (Schultz, 2000a). These results imply that, whereas many children before PROGRESA would leave school after completing the primary level, an important fraction, particularly girls, are now going on to secondary school.

Does PROGRESA encourage drop-outs to return to school?

The available evidence shows that much of the positive impact on enrollment is due to increasing continuation rates rather than on getting children who were out of the school system to return to school. For instance, for boys who were attending school prior to the program, the impact of PROGRESA is to increase enrollment rates by 8.0 percentage points, whereas for boys who were out of

school, this impact was only 5.4 percentage points. Furthermore, those kids who do return to school tend to only return for a year, whereupon they drop out again, suggesting that the program's impact is primarily to increase continuation rates rather than return rates. It is perhaps not surprising that many children do not return, given that most of these children had been out of school several years already at the time PROGRESA was implemented. With new generations of children, it is likely that PROGRESA will reduce dropout rates, and thus reinforce the effect of PROGRESA to increase continuation rates. (Coady, Parker and Hernandez, 2000).

How does the size of the educational grant compare with the costs poor families incur when they enroll their children in school?

The current structure of educational grants of PROGRESA is uniform for children of a given gender and age group. Yet there is a large heterogeneity in the needs and circumstances constraining poor households from sending their children to school. For families that would have sent their children to school even without PROGRESA, such as families with primary school-aged children and some families with children of secondary school age, the grant represents a clear income gain. But the households that in the absence of PROGRESA would not enroll their children in school may experience a decrease in their children's supply of labor to work in the labor force or in household production. Research shows that there is a modest reduction in the labor participation rates of children of beneficiary families particularly in unpaid activities, implying that overall, the income increase that families receive with the benefits of PROGRESA is not substantially reduced by reductions in children's labor income. (Parker and Skoufias, 2000).

Does PROGRESA increase the time children spend doing school homework and their performance in school?

Whereas PROGRESA has a significant impact on the number of children who enroll in school, it thus far does not show a significant impact on the time children spend in school or on the time they spend after school on assigned homework. The average child enrolled in school spends approximately one hour on school tasks at home,

both in PROGRESA and control areas (Parker and Skoufias, 2000). Additionally, preliminary analysis of school standardized tests did not show any significant impact of PROGRESA in improving student scores on achievement tests. Whereas additional years of data are needed to provide more conclusive evidence, the possibility of including bonuses or prizes to provide incentives for achieving high grades could be explored.

Is PROGRESA having an impact on school attendance?

A panel sample of data using children ages 6 to 16, some who benefit from PROGESA scholarships and some who do not, indicates that for the school year of 1998/99, attendance rates in schools are higher in localities that are further removed from major urban areas but the evaluation research clearly shows that PROGRESA has a more pronounced effect on school enrollment rates than on attendance rates. Because enrollment does not guarantee attendance, this question deserves fuller investigation (Schultz, 2000b).

Do PROGRESA's educational grants encourage families to have more children?

By design the educational benefits of PROGRESA are targeted to children between 8 and 17 years of age. For these benefits to have a significant effect on the fertility decisions of rural men and women it is necessary for households to have confidence that these benefits will be continued for at least 8 years into the future. As of November 1999 there is no statistical evidence that PROGRESA female beneficiaries had higher fertility than poor females in control localities.

component of the program?

What were the perceptions of stakeholders in PROGRESA localities regarding the operation of the educational

Analysis of the quantitative and qualitative data revealed that delays in the receipt of educational grants were common in the early stages of the program in part due to the cumbersome nature of the form design used to register school attendance (Adato, Coady, and Ruel, 2000). The collection, filling out, and returning of forms involved substantial time costs often incurred personally by school directors. The simplification of the forms appears to have reduced the time it takes to fill them out

and teachers and school directors seem to be in agreement with the objectives of the program and the conditioning of transfers on attendance. Beneficiaries may have experienced a lag in the receipt of educational grants and indeed PROGRESA's own records reveal that significant delays took place at the early stages of the program primarily due to delays in the verification of school attendance.

Policy Considerations for PROGRESA's Education Interventions

- Since the rate of return to completing senior high school is higher than completing junior high school it is necessary to consider extending the school benefits of PROGRESA to senior high school students.
- Consider re-orienting benefits from primary school to secondary school level because the impact is far greater in enrollment in secondary school.
- Explore the possibility of linking benefits to performance (e.g., granting bonus to encourage successful completion of grade) and/or to other programs, such as PROBECAT.
- Since the impact of the program is higher for girls and there is evidence girls are now doing better than boys in school, consider equalizing the benefits for school attendance for boys and girls at the secondary school level.

The impact of PROGRESA on health, nutrition, and health-care use

Background

The use of health-care in rural Mexico is extremely low compared to other Latin American countries. On average, rural Mexicans make less than one visit to a medical provider per year. The non-poor make about .8 visits and the poor make about .65 visits per year.

The nutrition of preschool children is of considerable importance not only because of concern over their immediate welfare, but also because their nutrition in the formative stage of life is widely perceived to have substantial and persistent impact on their physical and mental development and on their health status as adults. Stunting — low height-for-age — is a major form of protein–energy malnutrition. In 1998 survey results indicate that 44% of 12-36 month old children in PROGRESA regions were stunted.

PROGRESA established four specific strategies designed to improve health status:
(i) provide free basic health services through strengthened health services; (ii) prevent malnutrition in children, beginning from conception; (iii) improve human nutrition through monetary transfers, nutritional supplements, and education; and (iv) improve hygiene habits through educational seminars for parents.

While these strategies were intended to improve the health of all family members, special attention is paid to children under 5 years of age, and pregnant and lactating women. The free basic health services are available to all PROGRESA family members. The basic health services include primary health care, pre-natal care, infant delivery and well baby care, family planning, nutrition and growth monitoring of infants, immunizations, treatment of diarrhea cases, treatment of parasites in the household, management of respiratory problems, prevention and control of pulmonary tuberculosis, prevention and control of arterial hypertension and diabetes mellitus, accident prevention and first aid treatment on initial lesion, informational training on health habits, and detection and control of cervical cancer.

PROGRESA aims to provide the above health services via public clinics in the beneficiary areas. To guarantee that these clinics have the necessary infrastructure to supply the health services, PROGRESA strengthens the quality of health services by ensuring an adequate supply of medication and supplies, proper medical equipment, and competent doctors and nurses; in addition, wages of doctors and nurses in rural areas have been increased significantly in real terms. In order to receive benefits, participants are required to make a certain number of preventive clinic visits per year to monitor the health and nutritional status of each beneficiary. The clinic visits are more frequent for children 5 years of age and under, and pregnant and lactating women. During each visit the nutritional status of children and lactating women is indicated through weight-for-height (wasting), height-for-age (stunting), and weight-for-age. To ensure the frequency of these visits, PROGRESA provides monetary transfers for the purchase of food, as well as providing nutritional supplements and basic education about hygiene, to those households that comply. Infants from four months to two years, and pregnant and lactating women are provided with free nutritional supplemental packages, and children between the ages of two and five are provided with nutritional supplements if malnourishment is detected during the required visits.

Methodologies

The effect of PROGRESA on health is evaluated at two levels: first, at the level of health clinics based on the administrative records of public clinics; second, at the individual level using data from the PROGRESA evaluation surveys. The analysis of the impact of PROGRESA on health care centers investigates whether the service and incentive provided by the program led to improved health-care and maintenance by exploring the impact on the use of facilities in terms of number of visits, and on the purpose of these visits, such as the monitoring of the nutritional status of children and the use of prenatal care.

"Improved nutrition and preventative care in PROGRESA areas have made younger children less susceptible to illness, reducing the probability of illness of 0-5 year olds by12%."

The facility-level data were obtained from surveys of 3,541 clinics operated by IMSS-Solidaridad from January 1996 to December 1998. This information, complimented from the records of PROGRESA, pertains

to the number of beneficiary families incorporated to the program every month in each clinic. About two-thirds of these clinics are in PROGRESA areas, while the remaining one-third operates in control areas.

As is the case for the PROGRESA evaluation survey, the availability of repeated observations on the same clinic over time, before and after the start of the program, permitted analysis of the changes over time within treatment and control clinics.

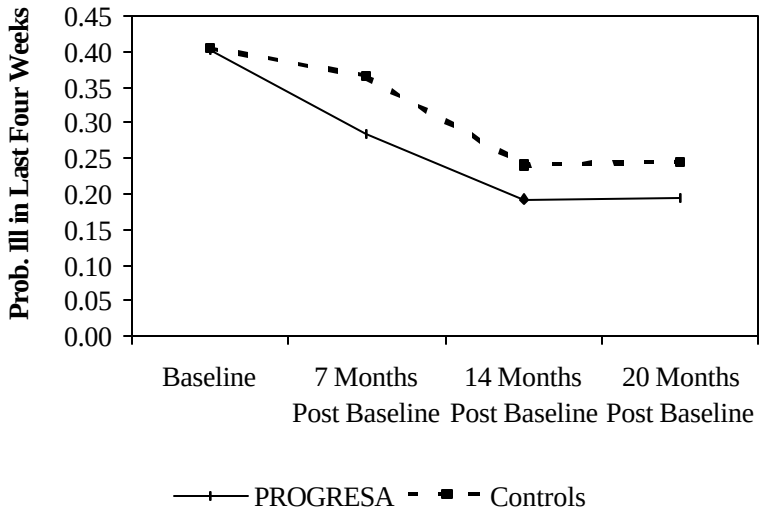
The individual level data from the PROGRESA evaluation surveys included information on the utilization of public clinics, public hospitals, private providers, the incidence and type of illness, children's visits to clinics for nutritional monitoring, and whether children have received different types of immunization. Analysis of blood tests for anemia and other deficiencies did not form part of this evaluation, although the National Institute of Public Health in Cuernavaca has carried out analysis in this area. In the last two rounds of the survey, adolescent and adult health status was measured by collecting information for the last 4 weeks on the days of difficulty with daily activities due to illness, days incapacitated due to illness, days in bed due to illness and the number of kilometers they were able to walk without getting tired.

Does PROGRESA have an effect on children's health?

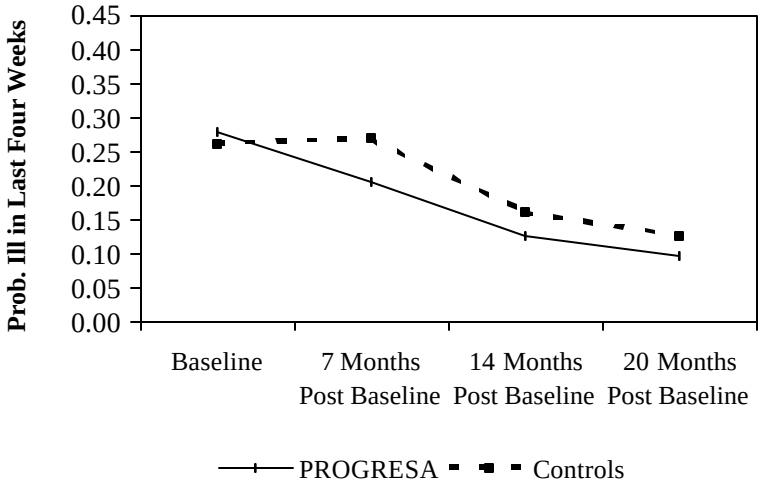
Improving livelihood security for the poor depends on improving early childhood health care. Frequency and duration of illness have profound effects on the development and productivity of populations. The analysis indicates that improved nutrition and preventative care in PROGRESA areas have made younger children more robust against illness. Specifically PROGRESA children 0-5 have a 12% lower incidence of illness than non-PROGRESA children do (Gertler, 2000).

Figure 1

Incidence of Illness For 0-2 Year Olds



Incidence of Illness For 3-5 Years Olds



Source: Gertler, P. 2000.

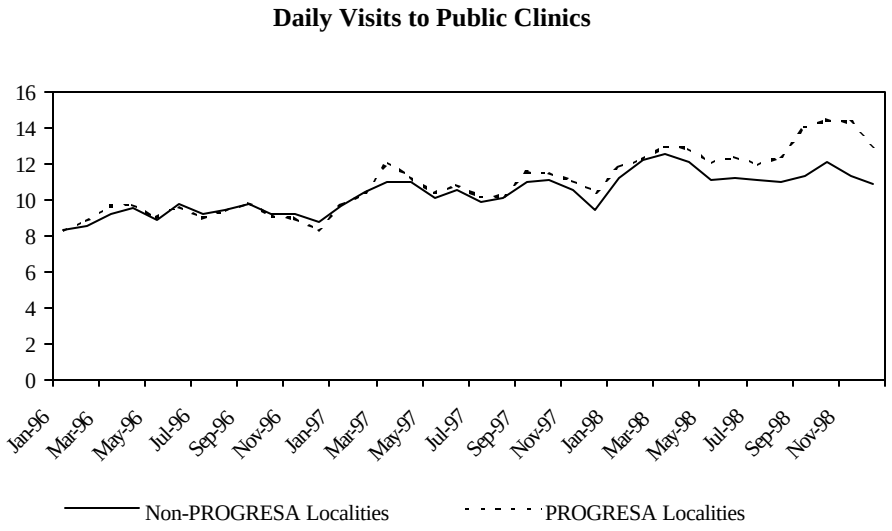
Does PROGRESA have an effect on the health of adults?

The analysis also finds that adult members in beneficiary households are significantly healthier (Gertler, 2000). On average, PROGRESA beneficiaries have 19% fewer days of difficulty with daily activities, 17% fewer days incapacitated, 22% fewer days in bed, and are able to walk about 7% more than non-beneficiaries. Prime age PROGRESA adults (ages 18-50) had a significant reduction in the number of days of difficulty with daily activities due to illness and a significant increase in the number of kilometers able to walk without getting tired. Specifically, PROGRESA beneficiaries have 19% fewer days of difficulty due to illness than non-PROGRESA individuals, and are able to walk about 7.5% more without getting tired. For those over 50, PROGRESA beneficiaries have significantly fewer days of difficulty with daily activities, days incapacitated, and days in bed due to illness than non-beneficiaries. As with younger adults, they are able to walk more kilometers without getting tired.

Is there an overall increase in visits to public health clinics in PROGRESA areas as compared to non-PROGRESA communities?

In January 1996, more than a year before PROGRESA began, average visits to clinics were identical in control and treatment localities. In 1998, the first full year in which PROGRESA was operational in all treatment localities, visit rates in PROGRESA communities were shown to grow faster in PROGRESA villages than in control areas (Gertler, 2000). In addition, there was a significant increase in nutrition monitoring visits, immunization rates and prenatal care. Regarding pre-natal care, the evaluation analysis indicates that PROGRESA increased the number of first visits in the first trimester of pregnancy by about 8%. This shift to early pre-natal care significantly reduced the number of first visits in the second and third trimester of pregnancy. Thus as a result of PROGRESA, pregnant women make their first visit to the clinic much earlier than before, a positive change in behavior that is documented to have a significant improvement in the health of babies and pregnant mothers.

Figure 2



Source: Gertler, P. 2000.

Are beneficiaries merely moving from private to public facilities?

The analysis of the individual-level data on health care use by type of provider confirms that for 18-50 year olds and for those over 50, there was no impact on visits to private providers (Gertler. 2000). This suggests that the increase in the use of public clinics was not from substitution out of the private sector, but rather new participation for preventive purposes, from households previously not using public services.

Are PROGRESA's nutritional supplements having an impact on child growth?

The data suggest that PROGRESA has had a significant impact on increasing child growth and in reducing the probability of child stunting for children in the critical age range of 12 to 36 months (Behrman and Hoddinott, 2000). These estimates imply an increase of about a sixth (16%) in mean growth per year, corresponding to about 1 centimeter for these children per year. The effects may be somewhat larger for children from poorer households and poorer communities but who come from households with more

educated household heads. Overall, the effects suggest that PROGRESA had an

Are PROGRESA's nutritional supplements getting to the intended beneficiaries?

Will improved nutrition via PROGRESA have an effect on the child's productivity in the long run?

What were the perceptions of stakeholders in PROGRESA localities regarding the operation of the health and nutritional component of the program?

important impact on growth for the children who received treatment in the critical 12-36 month age range.

There is evidence that a significant fraction of children in PROGRESA are not regularly receiving the supplements (Behrman and Hoddinott, 2000). Furthermore, in some cases, supplements were not fully consumed and in several households the supplement was shared among other family members, suggesting that its effects may have been diluted. Increased and more accurate distribution of the supplement may increase the impact of PROGRESA on nutrition indicators, such as height.

The analysis of the data suggests that PROGRESA may be having a fairly substantial effect on lifetime productivity and potential earning of currently small children in poor households. IFPRI estimates that the impact from the nutrition supplements alone could account for a 2.9% increase in lifetime earnings (Behrman and Hoddinott, 2000). In addition there are likely to be other effects through increased cognitive development, increased schooling, and lowered age of completing given levels of schooling through starting when younger and passing successfully grades at a higher rate. Since the nutrition supplement (*papilla*) constitutes only a small fraction of the program costs given full compliance, the benefit to cost ratio of the nutrition supplement is likely to be high.

Analysis of the quantitative and qualitative data revealed that the administration of the health and nutrition component of the program has improved considerably (Adato, Coady, and Ruel, 2000). In 1999 registration of beneficiaries was reported to have reached 97% and heath care professionals report little problems with filling out forms. Appointment books have proven to be an

effective mechanism for insuring compliance to scheduled visits despite the reported lack of time, transportation and awareness of the benefits of preventative health care. The health education seminars (*pláticas*) were found to be widely available, effective and very popular among beneficiaries, *promotoras* and health professionals. Problems reported with *pláticas* in some cases were that male doctors giving talks to women about family planning and the pap smear test is culturally problematic, and that the participation of non-beneficiaries varies widely.

Nutritional supplements for the mother and child are very popular among beneficiaries, yet some receive only a fraction of the daily ration they are supposed to receive from the program. Surveys reveal that families either run out of supplements and do not replace them immediately, share the supplements with other household members, or the supplements are diluted thus diminishing their effectiveness. It also appears that the supplements are being distributed to non-beneficiaries, regardless of their nutritional status.

Policy Considerations for Improving PROGRESA's Child Health and Nutrition Interventions

The combination of *platicas* with the provision of nutritional supplements, cash transfers, and the basic health care package makes it very difficult to disentangle the separate effects the components of the PROGRESA health package. The significant impact of the health component of PROGRESA, however, suggests that it is imperative to:

- continue to require that families visit health center on a regular basis in order to receive the monetary supports for food;
- maintain and improve the distribution of the nutritional supplement (*papilla*), and the cash transfer for food;
- improve knowledge of beneficiaries on the usage of the nutritional supplement;
- continue with the *platicas* and consider devising ways of reinforcing them with additional instructional tools.

Impact of PROGRESA's Monetary Transfers on Household Consumption and Work Incentives

Background

A monthly monetary transfer of 135 pesos for food support (second semester 2000) is given to all beneficiary families regardless of their location, size, and household composition. Beneficiaries are entitled to this support on the condition that the scheduled health-care visits are completed. It should be noted that these monetary benefits are currently capped at 820 pesos per household per month, and that the nominal amount of benefits is adjusted upward in January and July each year to account for increases in the cost of living.

Why measure consumption? Expenditure-based or consumption-based standard of living measures are preferable to income-based measures because estimates of current consumption are likely to provide a more reliable estimate of household's permanent income than estimates of current income that is subject to peaks and troughs. Consumption measures what people actually consume and thus provide a better measurement of a household's standard-of-living.

Methodology

Measuring consumption is not straightforward. Households rarely know how much they have spent over a given reference period, and experiments in survey design indicate that questions about broad categories of expenditures tend to lead to underestimates of consumption. Thus, the questions the evaluation exercise posed to households related to consumption were narrowed and then the results were aggregated up.

In each of the evaluation surveys, households were asked a set of questions on expenditures for food and non-food goods. The "most knowledgeable individual" in the household was asked, "In the last seven days, how much did you spend on the following foods?" Thirty-six different foods were queried.

Non-food expenditures are reported based on weekly expenditures, monthly expenditures, and expenditures made over the previous six months. These were all converted to monthly expenditures and then converted into November 1997 prices for comparable analysis.

"PROGRESA has had a positive effect on consumption, particularly on improving dietary quality."

The connection between PROGRESA's subsidy and both monetary and non-monetary private transfers from individuals outside the household was investigated using two methods of empirical analysis. Descriptive statistics compared the frequency and level of inter-household transfers between non-beneficiaries and beneficiary groups at two points in time for which the data were available. Other characteristics of the households that received and did not receive were also compared. Second, selection into PROGRESA was analyzed econometrically to determine whether the selection itself had a significant impact on the incidence and levels of existing private transfers, such as remittances from individuals working abroad.

It is worth commenting that the large increase in cash that these communities receive as a result of having PROGRESA beneficiaries is likely to have an effect on local economies and the development of new markets. Whereas this was not an aspect that was evaluated, it is an important topic that should be examined in future evaluations.

How large are the monetary transfers received by PROGRESA beneficiary households?

The average monthly transfers during the twelve-month period from November 1998 to October 1999 are around 238 pesos per beneficiary household per month (expressed in July 2000 pesos). The calculation of this average includes households that did not receive any benefits due to non-adherence to the conditions of the program, or delays in the verification of the requirements of the program or in the delivery of the monetary benefits. These transfers are 19.5% of the mean value of consumption of poor households in control localities. On average, households receive 119 pesos for food support (*alimento*), and 109 pesos for the educational grant (*beca).* The *alimento* accounts for 68% of the transfers received by households headed by individuals 60 years or older, a finding not surprising, given that such households will tend to have fewer children of school age.

Does PROGRESA have an impact on household consumption?

Using data from the three surveys after the start of PROGRESA, the average level of consumption (including purchases and consumption out of own production) increases by approximately 10.5%. (Hoddinott, Skoufias and Washburn, 2000). The rest of the transfers were likely used for saving or other purchases such as durable goods.

Does participation in PROGRESA affect the acquisition of food purchases in poor households?

In 1999, median food expenditures are 13% higher in PROGRESA households when compared with comparable control households (Hoddinott, Skoufias and Washburn, 2000).

Do PROGRESA households eat a more varied diet than non-PROGRESA recipients do?

Not only are PROGRESA households increasing overall acquisition of food, they are choosing to improve dietary quality over caloric intake. The increase in household consumption is driven largely by higher expenditures on fruits, vegetables, meats, and animal products. By November 1999, median caloric acquisition has risen by 10.6%. There is also clear evidence that dietary quality has improved in PROGRESA households (Hoddinott, Skoufias and Washburn, 2000). The impact is greatest on the acquisition of calories from vegetable and animal products. These quantitative findings from the 7-day recall surveys reinforce the views of beneficiaries that access to PROGRESA has meant that they "eat better."

Do *platicas* have a measurable effect on the types of food consumed by PROGRESA beneficiaries?

Participation in PROGRESA is found to have an impact on the acquisition of calories from fruits, vegetables, and animal products even after controlling for the effect of increased household income from monetary transfers (Hoddinott, Skoufias and Washburn, 2000). Broadly speaking, half the increase in caloric acquisition of fruits, vegetables, and animal products is due to the PROGRESA monetary transfers; half

the increase can be plausibly attributed to the operation of the *platicas* and

its interaction with the monetary benefits. This result implies that the *platicas* tend to reinforce the positive effect of the monetary transfers. However, this *platica* effect does not appear to vary systematically by education level. It is mainly observed in households with pre-school children. This latter finding is particularly significant, given that in Mexico, poor quality diets inhibit the physical growth of children less than 30 months. There is also some evidence that information conveyed during the *platicas* spills over, and alters, in a positive fashion, the behavior of non-beneficiaries in treatment localities.

Does the availability of the free nutritional supplement (*papilla*) undermine efforts to increase caloric availability in beneficiary households?

A possible concern is that the provision of the *papilla* may cause households to divert expenditures on food to other items, thus undermining efforts to increase caloric availability in these households. If the *papilla* is truly "crowding out" household acquisition of calories, we would expect to see lower measures of impact for beneficiary households, especially among those with pre-school children. Statistical analysis of the caloric acquisition in households containing at least one child below the age of 5 revealed that such concerns are unfounded (Hoddinott, Skoufias and Washburn, 2000). The impact of participation in PROGRESA on caloric acquisition is, if anything, slightly higher for these households.

Does PROGRESA influence the *likelihood* that households receive private transfers of monetary or non-monetary resources from individuals outside the household?

There are no significant differences between treatment and control groups by year and over time with regards to the receipt of monetary transfers from individuals or friends not living in the household, including transfers from relatives working abroad, such as in the United States. After 19 months of receiving benefits, the analysis finds that the selection into the PROGRESA program has no influence over the incidence or level of either monetary or non-monetary private transfers within households (Teruel and Davis, 2000).

Does PROGRESA reduce incentives for adults to work?

PROGRESA does not appear to create negative incentives for work (Parker and Skoufias, 2000). Analysis of before and after program data shows no reduction in labor force participation rates either for men or for women. The analysis considered work in both salaried work as well as other types of work (self-employment and unpaid work) and found no impact of PROGRESA on either type of work.

Does the incidence of child labor decrease under PROGRESA?

Given that PROGRESA requires children to attend school to receive the education grants, one might expect to see a reduction in the incidence of child work. Evidence on labor force participation of boys and girls before and after the program began shows small, but generally not lasting reductions in the fraction of children working.

Policy Considerations to Improve PROGRESA's Impact on Household Consumption and Resource Transfer

- It is important to continue to find ways to maintain the quality of the p*laticas* and to ensure that the information provided is accurate.
- PROGRESA represents a large injection of cash into the beneficiary communities. The potential spillover and multiplier effects in the local economy deserve detailed consideration in future evaluations of the impact of PROGRESA

Impact of PROGRESA on Women's Status and Household Relations

Background

Mexico's social programs have recognized that mothers play a critical role in poverty reduction and livelihood security for the poor. The deliberate decision to give transfers directly to mothers is motivated by growing evidence that resources controlled by women are more likely to manifest greater improvements in child health and nutrition than resources placed in the hands of men. As a secondary effect, research has also found that by increasing control over resources, women's bargaining power within the family increases, which has been shown to have a positive effect on children's (particularly girls) education and the livelihoods of future generations.

Methodology

Measuring the impact of PROGRESA on women's status and household relations is challenging. In general, household surveys are blunt instruments in this regard because gender-based decision-making is often understated; without adequate understanding of the sociocultural context, probing questions can easily be misinterpreted. Thus, this section of the evaluation takes a two-pronged approach using quantitative and qualitative surveys to ascertain the position of women within the household (Adato, et al. 2000). The former uses data from the Survey of Socio-Economic Characteristics of Households (ENCASEH) and three successive Evaluation Surveys (ENCEL). The analysis seeks to ascertain (1) whether PROGRESA has influenced household relationships and the impact of women's status and, (2) the extent to which PROGRESA has influenced the attitudes towards the education of girls and women.

Several rounds of qualitative surveys conducted over a two-year period asked a series of questions related to women's status and intra-household relationships. In addition, related questions were explored through focus groups and interviews conducted by IFPRI's researchers. An additional qualitative research effort took place in 1999 to further investigate questions raised during the previous surveys. Focus groups rather than semi-structured interviews were chosen in order to enrich responses.

Does PROGRESA have an effect on patterns of decision-making within the household?

PROGRESA's monetary transfers are a crucial aspect of the program with respect to bringing about changes in patterns of decision-making within households. While *residing in* a PROGRESA locality is shown to not have an effect on patterns of decision-making, *being in* PROGRESA decreases the probability that the husband is the sole decision-maker in five out of the eight decision-making outcomes. In PROGRESA families, over time husbands have shown they are less likely to make decisions by themselves, particularly as they affect the children. The surveys also indicate that through time, the probability that women solely decide on the use of their extra income increases.

Have men's attitudes toward women changed in PROGRESA areas?

Research has shown that by giving money to women, PROGRESA forces recognition among men, and within the community as a whole, of women's importance and of the government's recognition of women's level of responsibility in caring for the family. The survey shows that most men do not have problems with their wives participation in PROGRESA. Men see the benefits as good for the entire family since salaries, in general, are very low.

> *"For us that have children in school, the truth is that the fathers like PROGRESA very much, because it is help for them, because the truth is their salary is very small."*
>
> *— Promotora*

Has PROGRESA affected the demands on women's time?

Statistical analysis of time use of women shows that participation in the program did not have a significant impact on the time dedicated by women to work and home activities or to time spent traveling. In short, the requirements imposed by PROGRESA did not appear to reduce the leisure time of women.

In general accordance with the results of the quantitative analysis, focus groups discussions revealed that women were evenly divided as to whether PROGRESA was too demanding on their time. Those who said it was demanding referred to the time demands of meetings. Women also discussed how they and sometimes their husbands had to do additional work that used to be done by their children. However, they were quick to point out that this was worthwhile in order for their children to study.

Has PROGRESA had an impact on women's empowerment and bargaining power?

The vast majority of responses indicated that women have benefited in ways that can be seen as "empowerment" — defined as increased self confidence, awareness and control over their movements and household resources. Women report that they leave the house more often; have the opportunity to speak to each other about concerns, problems and solutions related to the household; are more comfortable speaking out in groups; are becoming more educated through the health *platicas*; and have more control over household expenditures.

Who controls PROGRESA's transfers within the home?

In focus group discussions, when asked, respondents indicated that, with a few exceptions, men do not take women's PROGRESA income. In general, men are said to work as hard and still give the same amount of money as they did before the family received PROGRESA.

"When they give it [monetary benefits] to me, sometimes [my children] have shoes and clothes, I save it for food and if I see that my children need a pair of pants, or something like it, I buy a pair of pants for my children. But it is always for them. I am the one who makes the decisions about the money they give me, because I am the one who knows what they are needing." — Promotora

Has PROGRESA had an impact on attitudes towards girls' education?

PROGRESA's educational incentives for girls are based on the belief that the increased education of girls is fundamental to improving their living standards and social participation. In an exploration of attitudes towards girls' education, the survey found overwhelming support among women for girls' education.

Yet when faced with the hypothetical dilemma of sending a boy or a girl to school, most respondents chose the boy. It is thought that boys are favored because of men's responsibility as breadwinners and heads of households and the fact that girls get married. That said, the main reason to encourage girls' enrollment in school was to enable girls to get employment, or better employment. In general, women in the program do not understand the concept of PROGRESA's incentive to keep girls in school. Most think that the benefit for girls is higher than for boys because girls have higher expenses.

Because responses about girls' education were far stronger than statements about PROGRESA's effect on women's position within the household, it is thought that PROGRESA will have a far stronger secondary effect on household relationships through the next generation more than the program is having on this one.

Policy Considerations to Improve PROGRESA's Impact on Women's Status and Household Relations

- PROGRESA should continue the policy of giving the monetary resources to women.
- Continue to evaluate the impact of PROGRESA on areas such as decision-making in the household, spending patterns, women's empowerment and conflict.

Supporting Documents from the IFPRI evaluation of PROGRESA

Adato, M. 2000. The Impact of PROGRESA on Community Social Relationships. August. International Food Policy Research Institute, Washington, D.C.

Adato, M., D. Coady, and M. Ruel. 2000. Final Report: An Operations Evaluation of PROGRESA from the Perspective of Beneficiaries, *Promotoras*, School Directors, and Health Staff. August. International Food Policy Research Institute, Washington, D.C.

Adato, M., B. de la Brière, D. Mindek, and A. Quisumbing 2000. Final Report: The Impact of PROGRESA on Women's Status and Intrahousehold Relations. August. International Food Policy Research Institute, Washington, D.C.

Behrman, J., and J. Hoddinott. 2000. An Evaluation of the Impact of PROGRESA on Pre-School Child Height. July. International Food Policy Research Institute, Washington, D.C.

Behrman, J., and P. E. Todd. 1999a. Randomness in the Experimental Samples of PROGRESA (Education, Health, and Nutrition Program). February. International Food Policy Research Institute, Washington, D.C.

Behrman, J., and P. E. Todd. 1999b. A Preliminary Evaluation of the Sample Sizes used for the Evaluation of the Education, Health, and Nutrition Program (PROGRESA) of Mexico. January. International Food Policy Research Institute, Washington, D.C.

Behrman, J., B. Davis, D. Levy, and E. Skoufias. 1998. A Preliminary Evaluation of the Selection of Beneficiary Households in the Education, Health, and Nutrition Program (PROGRESA) of Mexico. November. International Food Policy Research Institute, Washington, D.C.

Coady, D., S. Parker, and D. Hernandez. 2000. Cost-Benefit Analysis of Education. Forthcoming. International Food Policy Research Institute, Washington, D.C.

Coady, D., and R. L. Harris. 2000. Final Report: A General Equilibrium Analysis of the Welfare Impact of PROGRESA Transfers. April. International Food Policy Research Institute, Washington, D.C.

Coady, D. 1999. Preliminary Report on the Application of Social Cost-Benefit Analysis to the Evaluation of the Human Capital Impacts of PROGRESA. March. International Food Policy Research Institute, Washington, D.C.

Coady, D., and H. Djebbari. 1999. A Preliminary Process Evaluation of the Education, Health, and Nutrition Program (PROGRESA) of Mexico. June. International Food Policy Research Institute, Washington, D.C.

Gertler, P. J. 2000. Final Report: An Evaluation of the Impact of PROGRESA on Health Care Utilization and Health Status. July. International Food Policy Research Institute, Washington, D.C.

Handa, S., M-C. Huerta, R. Perez, and B. Straffon. 2000. Final Report: Poverty, Inequality, and "Spill-Over" in Mexico's Education, Health, and Nutrition Program. April. International Food Policy Research Institute, Washington, D.C.

Hoddinott, J., and E. Skoufias. 2000. Final Report: The Impact of PROGRESA on Consumption. August. International Food Policy Research Institute, Washington, D.C.

Parker, S., and E. Skoufias. 2000. The Impact of PROGRESA on Work and Time Allocation. Forthcoming. International Food Policy Research Institute, Washington, D.C.

Schultz, T. P. 2000a. School Subsidies for the Poor: Evaluating a Mexican Strategy for Reducing Poverty. June. International Food Policy Research Institute, Washington, D.C.

Schultz, T. P. 2000b. Final Report: The Impact of PROGRESA on School Enrollments. April. International Food Policy Research Institute, Washington, D.C.

Schultz, T. P. 2000c. Impact of PROGRESA on School Attendance Rates in the Sampled Population. February. International Food Policy Research Institute, Washington, D.C.

Schultz, T. P. 2000d. Preliminary Evidence of PROGRESA's Impact on School Enrollments from 1997/98 to 1998/99. February. International Food Policy Research Institute, Washington, D.C.

Schultz, T. P. 1999e. Preliminary Evidence of the Impact of PROGRESA on School Enrollments from 1997 and 1998. June. International Food Policy Research Institute, Washington, D.C.

Skoufias, E., B. Davis, and J. Behrman. 1999a. Final Report: An Evaluation of the Selection of Beneficiary Households in the Education, Health, and Nutrition Program (PROGRESA) of Mexico. June. International Food Policy Research Institute, Washington, D.C.

Skoufias, E., B. Davis, and S. de la Vega. 1999b. Targeting the Poor in Mexico: Evaluation of the Selection of Beneficiary Households into PROGRESA. International Food Policy Research Institute, Washington, D.C.

Teruel, G., and B. Davis. 2000. Final Report: An Evaluation of the Impact of PROGRESA Cash Payments on Private Inter-Household Transfers. August. International Food Policy Research Institute, Washington, D.C.

Workshop Proceedings

Proceedings of the IFPRI-PROGRESA Workshop on the Final Report of the Impact of PROGRESA on School Enrollment
April 6, 2000, Mexico City

Proceedings of the IFPRI-PROGRESA Workshop on the Evaluation of the Impact of PROGRESA on Consumption and on Women's Status and Intrahousehold Relations
March 2, 2000, Mexico City

Proceedings of the IFPRI-PROGRESA Workshop on the Impact of Mexico's Education, Health, and Nutrition Program (PROGRESA) at the Community Level
November 11, 1999, Mexico City

Proceedings of the IFPRI-PROGRESA Workshop on the Evaluation of the Operations of PROGRESA
June 11, 1999, Mexico City

Proceedings of the IFPRI-PROGRESA Workshop on the Evaluation of Selection of PROGRESA Beneficiaries
February 26, 1999, Mexico City

Proceedings of the IFPRI-PROGRESA Workshop on the Presentation of Methodology to be Used in the Evaluation of PROGRESA's Impact on Household Welfare, Consumption, Health, Nutrition, and Child School Attendance
November 18, 1998, Mexico City

IFPRI-PROGRESA Research Team and Affiliated Institutions

IFPRI

Dr. Michelle Adato
Dr. David Coady
Dr. Benjamin Davis
Dr. Rebecca Lee Harris
Dr. John Hoddinott
Dr. Agnes Quisumbing
Dr. Marie Ruel
Dr. Emmanuel Skoufias
Mr. Ryan Washburn

Dr. Bénédicte de la Brière (IFPRI/World Bank)
Ms. Habiba Djebbari (IFPRI/University of Maryland)
Ms. Lyla Kuriyan
Dr. Sudhanshu Handa (IFPRI/ IDB)
Dr. Susan Parker (IFPRI/PROGRESA)

UNIVERSITIES

USA

Dr. Jere Behrman, University of Pennsylvania
Dr. Paul J. Gertler, University of California, Berkeley
Dr. T. Paul Schultz, Yale University
Dr. Petra E. Todd, University of Pennsylvania

Mexico

Ms Dubravka Mindek, Escuela Nacional de Antroplogía e Historia
Dr. Graciela Teruel, Universidad Iberoamericana

PROGRESA

Dr. José Gómez de León
Mr. Daniel Hernandez
Ms. Monica Orozco
Ms. Patricia Muniz
Mr. Humberto Soto
Mr. Sergio de la Vega
Ms. Mari-Carmen Huerta
Mr. Raul Perez
Ms. Daniela Sotres

Ms. Beatriz Straffon
Ms. Hadid Vera